

# WYOMING VOLUNTEER EMERGENCY MEDICAL TECHNICIAN PENSION FUND

ACTUARIAL VALUATION REPORT FOR THE YEAR BEGINNING JANUARY 1, 2014



April 22, 2014

Board of Trustees

Wyoming Volunteer Emergency Medical Technician Pension Fund
6101 Yellowstone Road
Suite 500
Cheyenne, WY 82002

Dear Board of Trustees:

#### **Subject:** Actuarial Valuation as of January 1, 2014

We are pleased to present the report of the actuarial valuation of the Wyoming Volunteer Emergency Medical Technician Pension Fund ("the Fund") for the plan year commencing January 1, 2014. This report describes the current actuarial condition of the Fund, determines the calculated employer contribution amount (the actuarially required amount), and analyzes changes in this contribution amount from the prior year. Valuations are prepared annually, as of January 1, the first day of the Fund's plan year.

#### Financing objectives and funding policy

The employee contribution amounts are specified in statute. Employer contributions come from a "set-aside" fund. The purpose of this actuarial valuation is to determine the contribution level needed to meet the obligations of the Fund.

#### Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio as of January 1, 2014, based upon the assumption of no future cost-of-living adjustments (COLA), is 131.70%. In the January 1, 2013 valuation, the funded ratio under the no COLA assumption was 126.80%. On a market value of assets basis, the Fund's funded ratio increased from 130.77% as of January 1, 2013 to 139.61% as of January 1, 2014. If the set-aside fund is the sole source of funding for this plan, then approximately three years remain for funding.

#### **Benefit provisions**

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2014. W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. There were no benefit changes since the prior valuation.

The benefit provisions are summarized in Appendix B of our report.

#### **Assumptions and methods**

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary. The current assumptions used in the valuation were adopted by the Board effective February 22, 2013. This is the first valuation using the new assumptions.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution amounts and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 25.

All assumptions and methods are described in Appendix A of our Report.

#### Data

Member data was supplied as of January 1, 2014 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2014 was prepared by Wyoming Retirement System and is the responsibility of management. McGee, Hearne & Paiz, LLP provided us the asset and financial information and will opine on Wyoming Retirement System's statements.

#### Plan experience

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. This past fiscal year the Fund had a total experience gain of approximately \$146,699. The aggregate results of these analyses are disclosed in Tables 4 & 5 under Section III of our Report.

The ongoing total cost (normal cost) of the fund decreased from \$139,021 to \$127,063. Since the number of active participants decreased from 170 to 147, the normal cost per active participant increased from \$818 to \$864.

#### **Actuarial certification**

All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company. Historical information for years prior to 2010 was prepared by the prior actuarial firm and was not subjected to our actuarial review. We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2014.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries and consultants. Mark Randall and Leslie Thompson are Enrolled Actuaries and all are members of, and meet the Qualification Standards of, the American Academy of Actuaries. Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

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EXECUTIVE SUMMARY

## **Executive Summary**

			January 1, 2014	January 1, 2014	January 1, 2013
	Item		No COLA	No COLA	No COLA
			New Assumptions	Old Assumptions	
1.	Contributions:				
	a. Total normal cost		\$127,063	\$119,927	\$139,021
	b. Employee contributions		(22,050)	(22,050)	(25,500)
	c. Other expected contributions			-	-
	d. Net employer normal cost		\$105,013	\$97,877	\$113,521
	e. Amortization payment		(38,711)	(47,749)	(27,344)
	f. Administrative expenses		19,500	19,500	19,600
	g. Required contribution		\$85,802	\$69,628	\$105,777
2.	Funding Elements:				
	a. Market value of assets (MVA)		\$1,201,375	\$1,201,375	\$930,560
	b. Actuarial value of assets (AVA)		\$1,133,294	\$1,133,294	\$902,336
	c. Actuarial accrued liability (AAL)		\$860,533	\$797,160	\$711,612
	d. Unfunded/(overfunded) actuarial accr	ued liability (UAAL)	(\$272,761)	(\$336,134)	(\$190,724)
3.	GASB 25/27 Elements:				
	a. Annual required contribution		\$85,802	\$69,628	\$105,777
	b. Actual contributions		N/A	N/A	113,195
	i. Employer		N/A	N/A	-
	ii. Other		N/A	N/A	113,195
	c. Percentage contributed		N/A	N/A	107.01%
	d. Funded ratio on an actuarial basis (AV	A/AAL)	131.70%	142.17%	126.80%
	e. Funded ratio on an market basis (MVA	A/AAL)	139.61%	150.71%	130.77%





DISCUSSION

### **Contribution Requirements**

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLAs).
- W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. The actuarial value funded ratio is 131.70% and the market value funded ratio is 139.61%.
- Actuarial assumptions and methods were updated since the prior valuation to those adopted February 22, 2013 by the Board. In particular, the assumed rate of return was lowered from 8.00% to 7.75%. All of the changes to the demographic and economic assumptions are detailed in Appendix A.
- The amortization payment is based upon the following assumptions:
  - 10-year open funding period
  - Contribution amounts are calculated as a level dollar
  - Future growth in the number of active members is not reflected in the annual valuation
- Analysis of the change in actuarially required contribution amounts is shown in Table 5 under Section III of our Report
- Currently, the only funding source aside from employee contributions is a "set-aside" account of \$274,113 as of January 1, 2014. This is the only known funding source for the Plan at this time.

#### **Calculation of Contribution Amounts**

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two sources, member contributions of \$12.50 per month and the set-aside fund. As shown in Table 1 under Section III of the report, the employer contribution amount has three components:

- The normal cost (NC)
- The amortization payment
- The administrative expenses

The NC is the theoretical amount which would be required to pay the members' benefits if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions.

Members are required to make employee contributions and only the excess of the NC over the member contribution amount is included in the employer contribution amount.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The amortization payment is the amount required to fund this difference. It is the amount, expressed as a level dollar amount, necessary to amortize the UAAL. This amortization is over a 10 year open amortization period. The Executive Summary shows the Amortization Payment compared to that of last year.

Administrative expenses are the average of the actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.

The calculated amount is used in determining the contributions necessary to meet the GASB Annual Required Contribution (ARC) for the twelve-month period beginning January 1, 2014.

### **Financial Data and Experience**

As of January 1, 2014, the Fund has a total market value of \$1,201,375. Financial information was received from McGee, Hearne & Paiz, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2013.

During 2013, the total investment return on the market value of assets (MVA), as reported by NEPC, LLC, was 13.53%, as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market value of assets. The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

The development of the AVA is shown in Table 9 under Section III of our Report. The AVA is \$1,133,294 and is 94.33% of the MVA as of December 31, 2013.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2013, this return was 10.80%. Because this is greater than the prior assumed 8.00% investment return, an actuarial gain occurred decreasing the unfunded actuarial accrued liabilities of the Fund by \$27,027. Table 10 shows a historical summary of market and actuarial return rates in recent years.

#### **Member Data**

Member data as of January 1, 2014 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 19 show summaries of certain historical data and include membership statistics.

Of the 147 active participants, 4 are eligible or will become eligible for retirement in 2014.

#### **Benefit Provisions**

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. A brief summary is as follows:

- Normal Retirement Eligibility
  - Eligibility varies by entry age according to the following schedule:

Entry Age	Retirement Age	Entry Age	Retirement Age
45 or less	60	56 - 57	66
46 - 47	61	58	67
48 - 49	62	59 - 61	68
50 - 51	63	62 - 63	69
52 - 53	64	64 - 65	70
54 - 55	65		

- Normal Retirement Benefit
  - \$15 per month for each of the first 10 years of service and \$18 per month for each year of service over 10.
  - For example, if a participant is hired at age 40 and starts contributing \$12.50 per month, he/she will have contributed a total of \$3,000 (excluding interest) at his/her first retirement age of 60. He/she will have an accrued benefit of \$15 per month for each of the first 10 years (\$15 \* 10 = \$150) plus \$18 per month for each of the remaining 10 years (\$18 \* 10 = \$180) for a total benefit of \$330 per month, or \$3,960 per year for the remainder of his/her lifetime plus 50% continuation for married participants.
- Normal Form of Payment is a 50% Joint & Survivor Annuity for married retirees and Life Annuity for unmarried retirees
- Employee Contributions are required
  - \$12.50 per month.
- Post-retirement Cost-of-Living Adjustments (COLAs)
  - W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.

There have been no changes to plan provisions since the prior valuation.

#### **Actuarial Methods and Assumptions**

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level dollar amount.
- The unfunded actuarial accrued liability is amortized over 10 years, calculated as a level dollar amount.
- The assumed annual investment return rate is 7.75%, with assumed inflation of 3.25%.
- Inactive vested participants are assumed to retire at normal retirement eligibility or the valuation date if already eligible to retire.

Based on the current mortality tables projected to 2018 to approximate annual changes due to the generational assumption (instead of full generational projections), the average future lifetime for current pensioners is 16.9 years.

Actuarial assumptions and methods were updated since the prior valuation to those adopted February 22, 2013 by the Board.

### **GASB and Funding Progress**

Governmental Accounting Standards Board Statement Number 25 (GASB 25) contains certain accounting requirements for the Fund. In particular, it requires the inclusion of two special schedules in the Fund's annual report:

- 1. Schedule of Funding Progress
- 2. Schedule of Employer Contributions

Information needed to prepare the Schedule of Funding Progress is included in Table 12 under Section III of the report.

GASB 27 also requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed.

Under GASB 27, the ARC must be calculated in accordance with certain parameters. In particular, it must include a payment to amortize the unfunded actuarial accrued liability (UAAL). This amortization payment must be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level dollar amount, or it may be computed as an amount which increases with payroll (level percentage of payroll). However, if payments are computed on a level percent approach, the payroll growth assumption may not anticipate future membership growth.

Since the recommended employer contribution amount of \$85,802 is computed as a level dollar amount using an amortization period of 10 years from the valuation date, the calculated amount meets the definition of an acceptable ARC.



SUPPORTING EXHIBITS

### **Calculation of Annual Required Contribution**

(Assumes No Future Cost-Of-Living Increases)

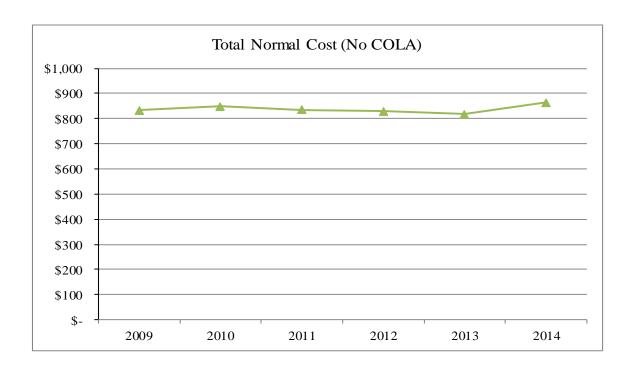
	Item	January 1, 2014	January 1, 2013
1.	Employer normal cost	\$105,013	\$113,521
2.	Actuarial accrued liability for active members		
	a. Present value of future benefits for active members	\$1,425,091	\$1,410,556
	b. Less: present value of future employer normal costs	(506,997)	(555,787)
	c. Less: present value of future employee contributions	(122,203)	(146,307)
	d. Actuarial accrued liability	\$795,891	\$708,462
3.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	\$25,187	\$0
	b. Disabled members	0	0
	c. Inactive members	39,455	3,150
	d. Active members (Item 2d)	795,891	708,462
	e. Total	\$860,533	\$711,612
4.	Actuarial value of assets (Table 9)	\$1,133,294	\$902,336
5.	Unfunded actuarial accrued liability (UAAL)		
	(Item 3e - Item 4)	(\$272,761)	(\$190,724)
6.	Funding period	10 years	10 years
7.	Assumed payroll growth rate	0.00%	0.00%
8.	Employer contribution requirement		
	a. UAAL amortization payment	(\$38,711)	(\$27,344)
	b. Employer normal cost	105,013	113,521
	c. Administrative expense	19,500	19,600
	d. Contribution requirement $(a + b + c)$	\$85,802	\$105,777

Cost Breakdown
(Assumes No Future Cost-Of-Living Increases)

	Present Value of Future Normal Costs	Actuarial Accrued Liabilities	Total Present Value of Benefits
Item	(1)	(2)	(3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	\$457,951	\$623,907	\$1,081,858
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	5,471	4,630	10,101
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	165,778	167,354	333,132
Benefits likely to be paid to vested inactive members	-	34,461	34,461
Benefits to be paid to members due refunds	-	4,995	4,995
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	-	25,187	25,187
Total	\$629,200	\$860,533	\$1,489,733
Actuarial value of assets	\$272,761	\$860,533	\$1,133,294
Liabilities to be covered by future contributions	\$356,439	-	\$356,439

## **History of Total Normal Cost per Active Member**

Dollar Normal Cost per Active Member (No COLA)
(2)
\$833
848
835
829
818
864



### **Calculation of Total Actuarial Gain/(Loss)**

(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2014
1. Derivation of experience gain/(loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	(\$190,724)
b. Normal cost (NC) for fiscal year ending 12/31/2013	139,021
c. Actual adminstrative expenses for fiscal year ending 12/31/2013	7,650
d. Actuarially determined contribution for fiscal year ending 12/31/2013	131,277
e. Interest accrual*:	
(i) For whole year on (a)	(15,258)
(ii) For half year on (b) $+$ (c) $-$ (d)	616
(iii) Total interest: $(e)(i) + (e)(ii)$	(14,642)
f. Change in UAAL due to plan changes	-
g. Change in UAAL due to assumption change	63,910
h. Expected UAAL current year: $(a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)$	(126,062)
i. Actual UAAL current year	(272,761)
j. Experience gain/(loss): (h) - (i)	146,699
k. Experience gain/(loss) as a % of actuarial accrued liability	17.05%
2. Approximate portion of gain/(loss) due to investments*	
(at actuarial value)	\$27,027
3. Approximate portion of gain/(loss) due to contributions*	
higher or lower than expected	\$6,038
4. Approximate portion of gain/(loss) due to liabilities: (1)(j) - (2) - (3)	\$113,634
a. Age & service retirements	29
b. Disability retirements	-
c. Death-in-service	(1,108)
d. Withdrawal from employment	110,589
e. Death after retirement	-
f. Other	4,123
g. Other as a % of actuarial accrued liability	0.48%

<sup>\*</sup> The interest accrual of 8.00% is used for the period January 1, 2013 through December 31, 2013. Effective January 1, 2014, the assumed interest rate is 7.75%.



## **Change in Calculated Contribution Amount Since the Prior Valuation**

(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2014
1. Colonlated contribution amount of of January 1, 2012	¢105 777
1. Calculated contribution amount as of January 1, 2013	\$105,777
2. Change in contribution amount during year	
a. Change in employer normal cost	(\$8,508)
b. Assumption changes	9,375
c. Recognition of prior asset losses (gains)	1,856
d. Actuarial (gain) loss from current year asset performance	(5,731)
e. Actuarial (gain) loss from liability sources and adminstrative expenses	(17,994)
f. Difference between contributions made and required contributions	(866)
g. Open amortization period reset to 10 years	1,892
h. Other changes	_
i. Total change	(\$19,975)
3. Calculated contribution amount as of January 1, 2014	\$85,802

## **Statement of Plan Net Assets**

Assets at Market Value					
Item	FYE 2013	FYE 2012			
1. Cash and cash equivalents (operating cash)	\$42,503	\$45,478			
2. Receivables					
a. Employee contributions	\$2,013	\$0			
b. Employer contributions	-	-			
c. Securities sold	5,343	2,391			
d. Accrued interest and dividends	3,880	2,826			
e. Currency contract receivable	161,270	23,060			
f. Other	-	-			
g. Rebate and fee income receivable	0	0			
h. Total receivables	\$172,506	\$28,277			
3. Investments, at fair value	\$1,330,399	\$1,013,206			
4. Liabilities					
a. Securities purchased	(\$16,331)	(\$16,527)			
b. Administrative and consulting fees payable	(29,075)	(32,966)			
c. Currency contract payable	(162,091)	(23,006)			
d. Securities lending collateral	(136,536)	(83,902)			
e. Total liabilities	(\$344,033)	(\$156,401)			
5. Total market value of assets available for benefits	\$1,201,375	\$930,560			



## **Reconciliation of Plan Net Assets**

	Assets at Market Value					
	Item	FYE 2013	FYE 2012			
A.	Market value of assets at beginning of year	\$930,560	\$647,906			
B.	Contribution income:					
	1. Contributions					
	a. Employee	\$23,888	\$24,859			
	b. Employer	-	-			
	c. Other	113,195	179,984			
	d. Total	\$137,083	\$204,843			
	2. Investment income					
	a. Interest, dividends, and other income	\$27,202	\$22,283			
	b. Write-up of assets	122,937	86,112			
	c. Investment expenses	(6,660)	(3,718)			
	d. Net investment income	\$143,479	\$104,677			
	3. Securities lending					
	a. Gross income	\$775	\$666			
	b. Deductions	(116)	(100)			
	c. Net investment income	\$659	\$566			
	4. Benefits and refunds					
	a. Refunds	(\$1,626)	(\$188)			
	b. Regular monthly benefits	(1,130)				
	c. Total	(\$2,756)	(\$188)			
	5. Administrative and miscellaneous expenses	(\$7,650)	(\$27,244)			
C.	Market value of assets at end of year	\$1,201,375	\$930,560			



## **Progress of Fund Through December 31, 2013**

Plan Year				Net			
Ending	<b>Employer</b>	<b>Employee</b>	Administrative	Investment	Benefit		<b>Actuarial Value</b>
December 31	Contributions*	Contributions	Expenses	Income**	Payments	Transfers	of Assets
Total	\$797,639	\$138,513	(\$70,112)	\$268,373	(\$3,319)	-	
2008	-	8,850	(11,445)	395	-	-	-
2009	144,000	29,462	(8,418)	10,576	-	-	\$175,620
2010	209,396	23,963	(6,458)	36,698	-	-	439,219
2011	151,064	27,491	(8,897)	47,909	(375)	-	656,411
2012	179,984	24,859	(27,244)	68,514	(188)	-	902,336
2013	113,195	23,888	(7,650)	104,281	(2,756)	-	1,133,294

<sup>\*</sup> Includes other funding sources

<sup>\*\*</sup> Net of investment expenses

### **Development of Actuarial Value of Assets**

Item	FYE 2013	FYE 2012
1. Actuarial value of assets, beginning of year	\$902,336	\$656,411
2. Market value, end of year	\$1,201,375	\$930,560
3. Market value, beginning of year	\$930,560	\$647,906
4. Non-investment/administrative net cash flow:		
a. Employee contributions	\$23,888	\$24,859
b. Employer contributions	-	-
c. Other contributions	113,195	179,984
d. Refund of employee accounts	(1,626)	(188)
e. Retirement benefits	(1,130)	-
f. Administrative expenses	(7,650)	(27,244)
g. Total net cash flow: [sum of (4a) through (4f)]	\$126,677	\$177,411
5. Investments and securities lending:		
a. Interest and dividends on investments	\$27,202	\$22,283
b. Gross income from securities lending	775	666
c. Fees and expenses	(6,776)	(3,818)
d. Total net income: [sum of (5a) through (5c)]	\$21,201	\$19,131
6. Investment income:		
a. Actual market return: (2) - (3) - (4g) - (5d)	\$122,937	\$86,112
b. Assumed rate of return***	8.00%	8.00%
c. Assumed amount of return	58,213	39,661
d. Amount subject to phase-In: (6a) - (6c)	\$64,724	\$46,451
7. Phase-in recognition of investment income:		
a. Current year: 0.20 * (6d)	\$12,945	\$9,290
b. First prior year	9,290	(9,922)
c. Second prior year	(9,922)	8,277
d. Third prior year	8,277	4,277
e. Fourth prior year	4,277	=
f. Total recognition	\$24,867	\$11,922
8. One-time recognition of deferred losses*:	-	(\$2,200)
9. Actuarial value of assets, end of year		
a. Preliminary actuarial value of assets, end of year:		
(1) + (4g) + (5d) + (6c) + (7f) + (8)	\$1,133,294	\$902,336
b. Upper corridor limit: 120% * (2)	\$1,441,650	\$1,116,672
c. Lower corridor limit: 80% * (2)	\$961,100	\$744,448
d. Actuarial value of assets, end of year	\$1,133,294	\$902,336
10. Difference between market and actuarial value of assets	\$68,081	\$28,224
11. Actuarial rate of return	10.80%	9.50%
12. Market rate of return **	13.53%	14.05%
13. Ratio of actuarial value to market value of assets	94.33%	96.97%

<sup>\*</sup> Actuarial value of assets was initialized at market value of assets plus \$2,200 upon the plan's initial valuation at January 1, 2009. One-time recognition brings the actuarial value of assets plus deferred investment gains (item 10) into balance with the market value of assets as of January 1, 2013.



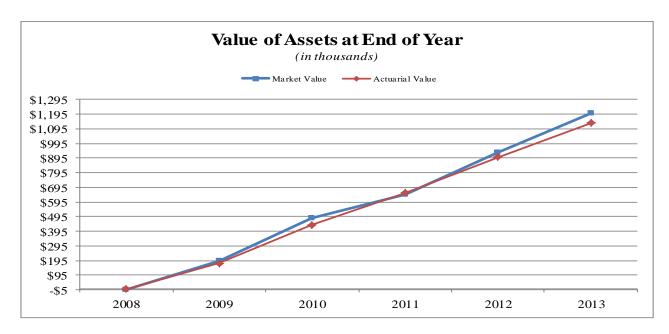
<sup>\*\*</sup> Current year market rate of return is based on unaudited data and is supplied by NEPC, LLC.

<sup>\*\*\*</sup> The interest accrual of 8.00% is used for the period January 1, 2013 through December 31, 2013. Effective January 1, 2014, the assumed interest rate is 7.75%.

### **History of Investment Returns**

Plan Year	Market	Actuarial
(1)	(2)	(3)
2008	-29.63%	0.00%
2009	23.72%	12.82%
2010	13.80%	12.70%
2011	-0.90%	9.15%
2012	14.05%	9.50%
2013	13.53%	10.80%
Average returns:		
Last five years:	12.56%	10.98%

The market rates above were provided by NEPC, LLC, including changes to the 2010 and 2012 rates since the prior valuation. The actuarial rates above are based on the financial information provided by McGee, Hearne & Paiz, LLP.





## **Solvency Test**

Valuation Date	Total Active Member Contributions	Inactive and Pensioner Liability	Employer Financed Active Accrued Liability	Actuarial Value of		ntage of Lia	
January 1	(1)	(2)	(3)	Assets	(1)	(2)	(3)
2009	\$11,418	\$0	\$49,560	\$0	0%	N/A	0.0%
2010	36,078	0	173,914	175,620	100%	100%	80.2%
2011	59,286	5,049	308,587	439,219	100%	100%	100.0%
2012	78,392	0	454,547	656,411	100%	100%	100.0%
2013	97,722	3,150	610,740	902,336	100%	100%	100.0%
2014	98,662	64,642	697,229	1,133,294	100%	100%	100.0%

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

## **Schedule of Funding Progress**

(1)	(2)	(3)	(4)	(5)	(6)
Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	UAAL per Active Member
2009	\$0	\$69,100	\$69,100	0.00%	\$452
2010	175,620	209,992	34,372	83.63%	203
2011	439,219	372,922	(66,297)	117.78%	(383)
2012	656,411	532,939	(123,472)	123.17%	(718)
2013	902,336	711,612	(190,724)	126.80%	(1,122)
2014	1,133,294	860,533	(272,761)	131.70%	(1,856)

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

## Schedule of Contributions from the Employer(s) and Other Contributing Entities

(1)	(2)	(3)	(4)
Fiscal Year Ending	GASB No. 25 Annual Required Contribution (ARC)	Employer Contributions*	Percentage of GASB ARC Contributed
December 31	Amount	Amount	[(3)/(2)]
2009	\$121,700	\$144,000	118.32%
2010	131,892	209,396	158.76%
2011	117,234	151,064	128.86%
2012	107,552	179,984	167.35%
2013	105,777	113,195	107.01%
2014	85,802	-	-

<sup>\*</sup> Includes other funding sources.

Effective January 1, 2010, ARCs are calculated assuming no future cost-of-living increases.

## **Reconciliation of Participant Data**

	Active Participants	Vested Former Participants	Retired Participants	Disableds	Beneficiaries	Participants Due Refunds	Total
Number as of January 1, 2013	170	-	-	-	-	8	178
New participants	14	-	-	-	-	-	14
Vested terminations	(7)	7	-	-	-	-	-
Retirements	(3)	-	3	-	-	-	-
Disability	-	-	-	-	-	-	-
Deceased with beneficiary	-	-	-	-	-	-	-
Deceased without beneficiary	-	-	-	-	-	-	-
Due refunds	(4)	-	-	-	-	4	-
Lump sum payoffs	(24)	-	-	-	_	(2)	(26)
Rehires/return to active	1	-	-	-	_	(1)	_
Certain period expired	-	-	-	-	-	-	-
Reclassifications	-	-	-	-	_	-	-
Data corrections	-	-	-	-	-	-	_
Number as of January 1, 2014	147	7	3	-	-	9	166

## **Demographic Statistics**

	January		
	2014	2013	Change
Active Participants			
Number	147	170	-13.5%
Vested	81	0	
Not vested	66	170	0.004
Average age (years)	47.51	47.13	0.8%
Average service (years)	4.21	3.64	15.7%
Average entry age (years)	43.30	43.49	-0.4%
Total employee contributions with interest	\$98,662	\$97,722	1.0%
Average employee contributions with interest	\$671	\$575	16.8%
Vested Former Participants			
Number	7	0	
Average age (years)	51.67	0.00	
Total employee contributions with interest	\$5,899	\$0	
Average employee contributions with interest	\$843	-	
Service Retirees			
Number	3	0	
Average age (years)	71.16	0.00	
Total annual benefits	\$2,749	\$0	
Average annual benefit	\$916	-	
Disability Retirees			
Number	0	0	
Average age (years)	0.00	0.00	
Total annual benefits	\$0	\$0	
Average annual benefit	-	-	
Beneficiaries			
Number	0	0	
Average age (years)	0.00	0.00	
Total annual benefits	\$0	\$0	
Average annual benefit	-	-	
Participants due refunds	9	8	12.5%



## Distribution of Male Active Members by Age and by Years of Service

Average Age = 46.6 Average Service = 4.3

	Age		gc Agc = 40.0		Years of Serv	ice at Valuatio	n Date		
1	Last Birthday	0-4	5-9	10-14				30 Plus	Totals
Less than 20	Count	_	_	_	_	_	25-29	_	_
	Total Contribution Balance	_	_	_	_	_	_	_	_
	Avg. Contribution Balance	_	_	_	_	_	_	_	_
20-24	Count	1	_	_	_	_	_	_	
	Total Contribution Balance	\$535	_	_	_	_	_	_	\$53
	Avg. Contribution Balance	\$535	_	_	_	_	_	_	\$53
25-29	Count	2	1	_	-	-	_	-	
	Total Contribution Balance	\$1,021	\$882	_	-	_	_	_	\$1,90
	Avg. Contribution Balance	\$511	\$882	_	_	-	_	-	\$63
30-34	Count	4	1	-	=	-	-	-	
	Total Contribution Balance	\$1,607	\$882	_	-	-	_	-	\$2,49
	Avg. Contribution Balance	\$402	\$882	_	_	-	_	-	\$49
35-39	Count	3	4	-	-	-	-	-	
	Total Contribution Balance	\$1,325	\$3,501	-	-	-	_	_	\$4,82
	Avg. Contribution Balance	\$442	\$875	_	_	-	_	-	\$68
40-44	Count	6	5	-	-	-	-	_	1
	Total Contribution Balance	\$2,056	\$4,383	-	-	-	-	-	\$6,43
	Avg. Contribution Balance	\$343	\$877	-	-	-	_	_	\$58
45-49	Count	1	3	-	-	-	-	-	
	Total Contribution Balance	\$755	\$2,646	-	-	-	-	-	\$3,40
	Avg. Contribution Balance	\$755	\$882	-	-	-	-	-	\$85
50-54	Count	4	4	-	-	-	-	-	
	Total Contribution Balance	\$1,995	\$3,528	-	-	-	_	-	\$5,52
	Avg. Contribution Balance	\$499	\$882	-	-	-	-	_	\$69
55-59	Count	5	6	-	-	-	-	-	1
	Total Contribution Balance	\$2,687	\$5,204	-	-	-	_	-	\$7,89
	Avg. Contribution Balance	\$537	\$867	-	-	-	-	_	\$71
60-64	Count	-	1	-	-	-	-	-	
	Total Contribution Balance	-	\$882	-	-	-	_	-	\$88
	Avg. Contribution Balance	=	\$882	=	=	=	=	-	\$88
65-69	Count	1	3	-	-	-	-	-	
	Total Contribution Balance	\$769	\$2,647	-	-	-	-	-	\$3,41
	Avg. Contribution Balance	\$769	\$882	-	-	-	-	-	\$83
70 & Over	Count	-	-	-	-	-	-	1	1
	Total Contribution Balance	-	-	-	-	-	-	-	-
	Avg. Contribution Balance					<u> </u>			
Totals	Count	27	28	-	-	-	-	-	5
	Total Contribution Balance	\$12,752	\$24,556	-	=	-	-	-	\$37,30
	Avg. Contribution Balance	\$472	\$877	_	_	_	_	_	\$67

## Distribution of Female Active Members by Age and by Years of Service

Average Age = 48.1 Average Service = 4.2

	Age		gc Agc = 40.1		Years of Serv	ice at Valuatio	n Date		
]	Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	Count	_	-	-	_	_	_	_	-
	Total Contribution Balance	-	-	_	_	-	_	-	_
	Avg. Contribution Balance	_	_	_	_	_	_	_	_
20-24	Count	2	1	_	_	_	_	_	3
	Total Contribution Balance	\$462	\$882	_	_	-	-	-	\$1,34
	Avg. Contribution Balance	\$231	\$882	_	_	-	-	-	\$44
25-29	Count	3	=	-	-	-	-	-	
	Total Contribution Balance	\$989	-	_	-	_	-	-	\$98
	Avg. Contribution Balance	\$330	-	-	-	-	_	-	\$33
30-34	Count	4	5	-	-	-	-	-	
	Total Contribution Balance	\$1,232	\$4,412	_	-	-	-	-	\$5,64
	Avg. Contribution Balance	\$308	\$882	_	-	-	-	-	\$62
35-39	Count	10	4	-	-	-	-	-	1-
	Total Contribution Balance	\$2,406	\$3,473	_	-	-	-	-	\$5,87
	Avg. Contribution Balance	\$241	\$868	-	-	-	_	-	\$42
40-44	Count	4	5	-	-	-	-	-	
	Total Contribution Balance	\$1,665	\$4,411	-	-	-	-	-	\$6,07
	Avg. Contribution Balance	\$416	\$882	-	-	-	_	-	\$67
45-49	Count	4	6	-	-	-	-	-	1
	Total Contribution Balance	\$1,714	\$5,293	-	-	-	-	-	\$7,00
	Avg. Contribution Balance	\$428	\$882	-	-	-	-	-	\$70
50-54	Count	6	11	-	-	-	-	-	1
	Total Contribution Balance	\$2,778	\$9,706	-	-	-	-	-	\$12,48
	Avg. Contribution Balance	\$463	\$882	-	-	-	-	-	\$73
55-59	Count	2	9	-	-	-	-	-	1
	Total Contribution Balance	\$1,210	\$7,855	-	-	-	-	-	\$9,06
	Avg. Contribution Balance	\$605	\$873	-	-	-	-	-	\$82
60-64	Count	1	8	-	-	-	-	-	
	Total Contribution Balance	\$88	\$7,058	-	-	-	-	-	\$7,14
	Avg. Contribution Balance	\$88	\$882	-	-	-	-	-	\$79
65-69	Count	-	4	-	-	-	-	-	
	Total Contribution Balance	-	\$3,529	-	-	-	-	-	\$3,52
	Avg. Contribution Balance	-	\$882	-	-	-	-	-	\$88
70 & Over	Count	1	2	-				-	
	Total Contribution Balance	\$427	\$1,765	-	-	-	-	-	\$2,19
	Avg. Contribution Balance	\$427	\$882	-		-	_	-	\$73
Totals	Count	37	55		-	-	-	-	92
	Total Contribution Balance	\$12,971	\$48,383	-	-	-	-	-	\$61,355
	Avg. Contribution Balance	\$351	\$880		-	-	-	-	\$667

## Distribution of Total Active Members by Age and by Years of Service

Average Age = 47.5 Average Service = 4.2

	A.c.	Average Age = 47.5 Average Service = 4.2  Whole Years of Service at Valuation Date							
	Age Last Birthday	0.4	0-4 5-9 10-14 15-19 20-24 25-29						Totals
· ·		U-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	Count	-	_	-	-	-	-	-	-
	Total Contribution Balance	-	-	-	-	-	-	-	-
20-24	Avg. Contribution Balance	3	<u>-</u> 1		-	-	-	-	-
20-24	Count Total Contribution Balance	s \$996	\$882	-	-	-	-	-	\$1,87
			\$882	-	-	-	-	-	
25.20	Avg. Contribution Balance	\$332				<del>-</del>		=	\$47
25-29	Count	5	1	-	-	-	-	-	
	Total Contribution Balance	\$2,011	\$882	-	_	-	-	-	\$2,89
20.24	Avg. Contribution Balance	\$402	\$882	-	-	-	-	-	\$48
30-34	Count	8	6	-	-	-	-	-	1
	Total Contribution Balance	\$2,839	\$5,294	-	-	-	-	-	\$8,13
	Avg. Contribution Balance	\$355	\$882	-	-	-	-	-	\$58
35-39	Count	13	8	-	-	-	-	-	2
	Total Contribution Balance	\$3,732	\$6,974	-	-	-	-	-	\$10,70
	Avg. Contribution Balance	\$287	\$872	-		_	_	-	\$51
40-44	Count	10	10	-	-	-	-	-	. 2
	Total Contribution Balance	\$3,721	\$8,794	-	-	-	-	-	\$12,51
	Avg. Contribution Balance	\$372	\$879	-	-	-	-	-	\$62
45-49	Count	5	9	-	-	-	-	-	1
	Total Contribution Balance	\$2,469	\$7,939	-	-	-	-	-	\$10,40
	Avg. Contribution Balance	\$494	\$882	-	-	-	-	-	\$74
50-54	Count	10	15	-	-	-	-	-	2
	Total Contribution Balance	\$4,773	\$13,234	-	-	-	-	-	\$18,00
	Avg. Contribution Balance	\$477	\$882	-	-	-	-	-	\$72
55-59	Count	7	15	-	-	-	-	-	2
	Total Contribution Balance	\$3,897	\$13,059	-	-	-	-	-	\$16,95
	Avg. Contribution Balance	\$557	\$871	-	-	-	-	-	\$77
60-64	Count	1	9	-	-	-	-	-	1
	Total Contribution Balance	\$88	\$7,940	-	-	-	-	-	\$8,02
	Avg. Contribution Balance	\$88	\$882	=	-	=	-	-	\$80
65-69	Count	1	7	-	-	-	-	-	
	Total Contribution Balance	\$769	\$6,176	-	-	-	-	-	\$6,94
	Avg. Contribution Balance	\$769	\$882	-	-	-	-	-	\$86
70 & Over	Count	1	2	-	-			-	
	Total Contribution Balance	\$427	\$1,765	-	-	-	-	-	\$2,19
	Avg. Contribution Balance	\$427	\$882	-	-	-	-	-	\$7.
Totals	Count	64	83		-	-	-	-	14
	Total Contribution Balance	\$25,723	\$72,939	-	-	_	_	-	\$98,66
	Avg. Contribution Balance	\$402	\$879	_	_	-	-	-	\$67

## Distribution of Male Deferred Members by Age and by Years of Service

Average Age = 54.2 Average Service = 5.1

T		111014801	1gc - 3-1.2	711010				
Age			Whole Ye	ars of Serv	vice at Valu	ation Date	<u> </u>	
Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	1	-	-	-	-	-	1
35-39	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-
55-59	-	1	-	-	-	-	-	1
60-64	-	-	-	-	-	-	-	-
65-69	-	1	-	-	-	-	-	1
70 & Over	-	-	-	-	-	-	-	-
Totals	-	3	-	-	-	-	-	3

# Distribution of Female Deferred Members by Age and by Years of Service

Average Age = 49.8 Average Service = 5.3

Age		Whole Years of Service at Valuation Date						
Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-
40-44	-	1	-	-	-	-	-	1
45-49	-	1	-	-	-	-	-	1
50-54	-	1	-	-	-	-	-	1
55-59	-	1	-	-	-	-	-	1
60-64	-	-	-	-	-	-	-	-
65-69	-	-	-	-	-	-	-	-
70 & Over	-	-	-	-	-	-	-	-
Totals	-	4	-	-	-	-	-	4

# Distribution of Total Deferred Members by Age and by Years of Service

Average Age = 51.7 Average Service = 5.2

Age		Whole Years of Service at Valuation Date							
Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals	
Less than 20	-	-	-	-	-	-	-	-	
20-24	-	-	-	-	-	-	-	-	
25-29	-	-	-	-	-	-	-	-	
30-34	-	1	-	-	-	-	-	1	
35-39	-	-	-	-	-	-	-	-	
40-44	-	1	-	-	-	-	-	1	
45-49	-	1	-	-	-	-	-	1	
50-54	-	1	-	-	-	-	-	1	
55-59	-	2	-	-	-	-	-	2	
60-64	-	-	-	-	-	-	-	-	
65-69	-	1	-	-	-	-	-	1	
70 & Over	-	-	-	-	-	-	-	-	
Totals	-	7	-	-	-	-	-	7	

# **Schedule of Pension Recipients Added to and Removed from Rolls**

									Percent		
Fiscal Year	Adde	d to Rolls	Remov	Removed from Rolls Total			Increase in	Ave	erage		
Ending		Annual		Annual			Annual		Annual	Ar	nual
December		Pension	1	Pe	nsion		Pe	nsion	Pension	Per	nsion
31	Count	Benefits	S Count	Be	nefits	Count	Be	nefits	Benefits	Be	nefit
2009	-	\$ -	-	\$	-	_	\$	-	0.00%	\$	-
2010	-	-	-		-	-		-	0.00%		-
2011	-	-	-		-	-		-	0.00%		-
2012	-	-	-		-	-		-	0.00%		_
2013	3	2,7	49 -		-	3		2,749	0.00%		916

# Pensioners by Amount and Age

Males	Age Last Birthday						
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
\$50 - 99	0	0	0	0	0	0	0
\$100 - 149	0	0	0	0	0	0	0
<b>\$150 - 199</b>	0	0	0	0	0	0	0
\$200 - 249	0	0	0	0	0	0	0
\$250 - 299	0	0	0	0	0	0	0
\$300 & Over	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
<b>\$50 - 99</b>	0	0	1	2	0	0	3
\$100 - 149	0	0	0	0	0	0	0
\$150 - 199	0	0	0	0	0	0	0
\$200 - 249	0	0	0	0	0	0	0
\$250 - 299	0	0	0	0	0	0	0
\$300 & Over	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total	0	0	1	2	0	0	3
Males & Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
<b>\$50 - 99</b>	0	0	1	2	0	0	3
\$100 - 149	О	0	0	0	0	0	0
<b>\$150 - 199</b>	0	0	0	0	0	0	0
\$200 - 249	0	0	0	0	O	0	0
\$250 - 299	0	0	0	0	O	0	0
\$300 & Over	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total	0	0	1	2	0	0	3



# **Pensions Awarded in 2013 by Status**

Average Age = 71.2

Males & Females		<b>Option Code</b>	
Benefit Amount	Retirees	Beneficiaries	Total
<b>Under \$200</b>	3	0	3
\$200-\$399	0	0	0
\$400-\$599	0	0	0
\$600-\$799	0	0	0
\$800-\$999	0	0	0
\$1,000-\$1,499	0	0	0
\$1,500-\$1,999	0	0	0
\$2,000-\$2,499	0	0	0
\$2,500 & over	0	0	0
Total	3	0	3
Males & Females			
Males & Females Benefit Amount	Retirees	Beneficiaries	Total
	Retirees 0	Beneficiaries 0	<b>Total</b>
Benefit Amount			
Benefit Amount Under 50	0	0	0
Benefit Amount Under 50 50-54	0 0	0	0 0
Benefit Amount Under 50 50-54 55-59	0 0 0	0 0 0	0 0 0
Benefit Amount Under 50 50-54 55-59 60-64	0 0 0 0	0 0 0 0	0 0 0 0
Benefit Amount Under 50 50-54 55-59 60-64 65-69	0 0 0 0 1	0 0 0 0	0 0 0 0 1
Benefit Amount Under 50 50-54 55-59 60-64 65-69 70-74	0 0 0 0 1 2	0 0 0 0 0	0 0 0 0 1 2
Benefit Amount Under 50 50-54 55-59 60-64 65-69 70-74 75-79	0 0 0 0 1 2	0 0 0 0 0 0	0 0 0 0 1 2

# **Retirees by Service at Retirement and Years Since Retirement**

Average Service at Retirement = 5.1 Average Years Since Retirement = 0.4

Service at	Trysrage s	Years Elapsed Since Retirement								
Retirement		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals	
Less than 5	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
5-9	Count	3	-	-	-	-	-	-	3	
	Avg. Benefit	\$76	-	-	-	-	-	-	\$76	
10-14	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
15-19	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
20-24	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
25-29	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
30-34	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit	-	-	-	-	-	-	-	-	
35 & Over	Count	-	-	-	-	-	-	-	-	
	Avg. Benefit		<u> </u>	_	_	_	_	-	<u>-</u>	
Totals	Count	3	-	-	-	-	-	-	3	
	Avg. Benefit	<b>\$76</b>	-	-		-	-	-	<b>\$76</b>	

# **Pensioners by Year of Retirement**

January 1, 2014 Total = 3

January 1, 2014 100	
Year of Retirement	Count
2001	-
2002	-
2003	-
2004	-
2005	-
2006	-
2007	-
2008	-
2009	-
2010	-
2011	-
2012	-
2013	3



# APPENDIX A SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

# **Summary of Actuarial Assumptions and Methods**

The following methods and assumptions were used in preparing the January 1, 2014 actuarial valuation report.

### 1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

### 2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level dollar amount. Under this method, the employer contribution amount is the sum of (i) the employer normal cost amount, and (ii) the amount that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 7.75%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, and sex. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level dollar funding approach, and consist of a normal cost contribution and an accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant amount of employer contributions which, if contributed on behalf of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on

his/her behalf based on the benefits provisions applicable for the individual member.

d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 10 years from the valuation date.

### 3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

### 4. Economic Assumptions

Investment return: 7.75% per year, compounded annually, composed of an assumed 3.25% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of investment expenses.



# 5. <u>Demographic Assumptions</u>

### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 5 years with a multiplier of 104%

Females: Set back 4 years with a multiplier of 90%

Healthy Post-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 1 year with a multiplier of 104% Females: Set back 0 years with a multiplier of 90%

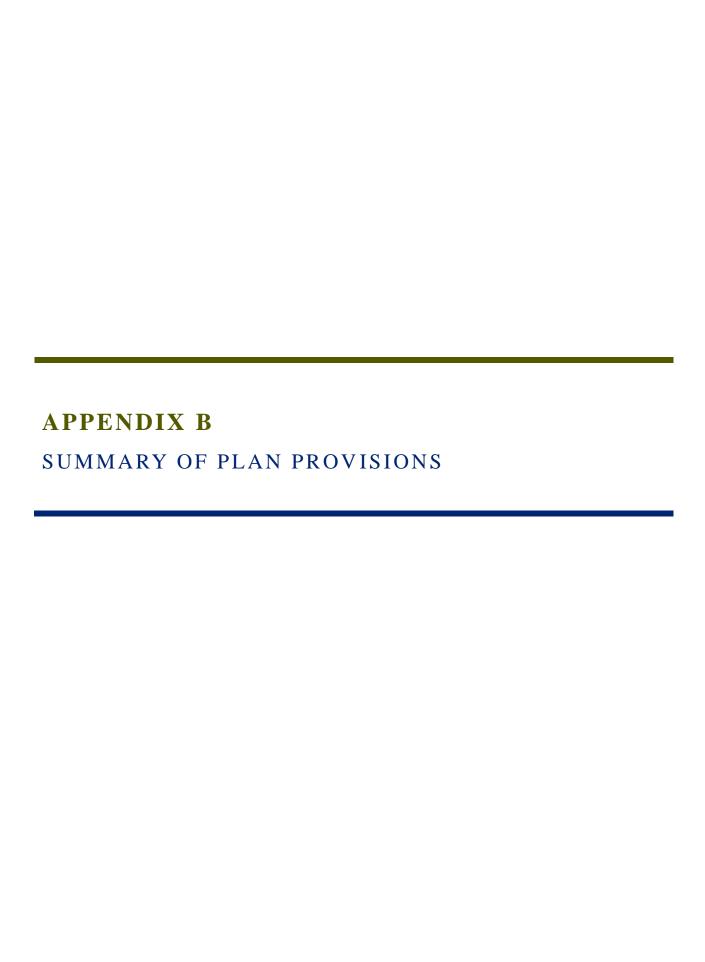
	Pre-Retirer	ment Death	Post-Retirement Death				
	Pı	rojected to 201	4 using Scale E	BB	Withdrawal		
Age	Male	Female	Male	Female	Entry age < 46	Entry age > 45	
20	0.03%	0.02%	0.03%	0.02%	20.00%	N/A	
25	0.03%	0.02%	0.04%	0.02%	15.00%	N/A	
30	0.04%	0.02%	0.04%	0.02%	11.00%	N/A	
35	0.04%	0.03%	0.07%	0.04%	11.00%	N/A	
40	0.08%	0.04%	0.10%	0.06%	9.00%	N/A	
45	0.11%	0.07%	0.14%	0.10%	4.00%	15.00%	
50	0.15%	0.11%	0.20%	0.14%	3.00%	15.00%	
55	0.21%	0.16%	0.32%	0.23%	1.00%	8.00%	
60	0.36%	0.26%	0.57%	0.40%	0.00%	5.00%	
65	0.64%	0.45%	1.00%	0.74%	0.00%	5.00%	
70			1.67%	1.27%			
75			2.85%	2.14%			
80			4.88%	3.49%			
85			8.40%	5.89%			
90			14.62%	10.15%			
95			23.63%	16.09%			
100			32.93%	20.49%			

b. Retirement Rates: Members are assumed to retire at first eligibility.

### 6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.

- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
- f. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.
- g. Decrement timing: Decrements of all types are assumed to occur mid-year.
- h. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- i. Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- j. Benefit service: All members are assumed to accrue one year of service each year.



## **Summary of Plan Provisions**

### **Covered Members**

Any volunteer EMT for whom payments are received by the volunteer emergency medical technician pension fund as prescribed in W.S. 35-29-106(e).

### **Service Retirement**

Eligibility

Eligibility varies by entry age according to the following schedule:

Entry Age	Retirement Age	Entry Age	Retirement Age
45 or less	60	56 - 57	66
46 - 47	61	58	67
48 - 49	62	59 - 61	68
50 - 51	63	62 - 63	69
52 - 53	64	64 - 65	70
54 - 55	65		

Monthly Benefit

\$15 per month for each of the first 10 years of service and \$18 per month for each year of service over 10.

Vesting

Any employee with five or more years of service who has left employment, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of contributions with interest. In addition, an employee with at least ten years of service may gain up to an extra five years of service by continuing to contribute. An employee who terminates with less than five years of service is only eligible for the lump-sum benefit.



### **Pre-retirement Death Benefit**

Eligibility No age or service requirements.

Monthly Benefit Upon the death of any participating member, the board shall authorize a

monthly payment to the surviving spouse of the member during the spouse's remaining lifetime of an amount equal to fifty percent (50%) of

the amount calculated above.

**Post-retirement Death Benefit** 

Monthly Benefit 50% of the member's benefit payable prior to the member's death.

**Contributions** 

Employee \$12.50 per month.

State Contributions are made in an amount equal to the actuarially required

amount determined as of January 1 of the plan year.

Interest 2.0% annually.

Cost-of-Living Improvements W.S. 9-3-454 prohibits benefit changes, including cost-of-living

increases, unless the funded ratio stays above 100% plus a margin for

adverse experience throughout the life of the benefit change.